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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/630,347

07/30/2003

Mark C. Inlow

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9292

21005

7590

08/04/2006

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EXAMINER

NGUYEN, TAI T

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

54

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/630,347	INLOW, MARK C.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tai T. Nguyen	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/20/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 4 is objected to because of the following informalities: "the performance" as claimed in claim 4 lacks of antecedent basic. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell (US 6,662,119).

Regarding claim 1, Mitchell discloses an apparatus for counting a number of insertion/removal of a connector having first and second parts (10, 12), comprising:

a sensor in the form of a sense pin (18, 18') for sensing an insertion of the first part with the second part of the connector (figure 1; col. 7, lines 9-18); and

a monitor (8) responsive to the sensor to monitor a number of insert of the connector (col. 6, line 62 through col. 7, line 35).

Mitchell discloses the instant claimed invention except for directly monitoring the wear of connector. Since Mitchell discloses the system for monitoring connector degradation based on the number of insertions/removal (title and col. 1, lines 53-67),

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to know that Mitchell's system is indirectly monitoring a wear condition of the connector based upon the number of insertions/removals in order to provide insertion information to a management entity.

Regarding claim 2, Mitchell discloses the sensor includes contact sensor elements to sense insertion (figure 1).

Regarding claim 3, Mitchell discloses the sensor includes sensing electronics to sense insertions, wherein the sensing electronics being independent of electronics associated with signals communicated through the connector (figure 1).

Regarding claim 4, Since Mitchell discloses the sensing electronics sensing degradation of the connector based upon insertions that leads to failures or reduced reliability resulting from stress applied to the connector from insertions, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to know that the sensing electronics determining a metric associated with the performance of the connector to estimate the wear condition of the connector.

Regarding claim 5, as shown in figure 1, Mitchell discloses the monitor being coupled to the sensor via a network.

Regarding claim 6, Mitchell discloses the monitor including a processor and memory (20, 22, 24) to processor signals received from the sensor and store data related to the processed signals (figure 1, col. 8, lines 16-59).

Regarding claim 7, Mitchell discloses the processor counts the insert and extractions/removal cycle (col. 7, lines 17-25).

Regarding claim 8, Mitchell discloses the memory being a non-volatile memory (see abstract).

Regarding claim 9, Mitchell disclose the processor generates an alarm signal (col. 8, lines 16-20).

Regarding claim 10, Mitchell discloses the sensor and monitor being deployed on a first circuit board (10, figure 1).

Regarding claims 11-20, the claimed method steps would have been inherent in the product structure as stated in claims 1-10 above.

Regarding claims 21-22, refer to product structure as rejected in claim 1 above.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai T. Nguyen whose telephone number is (571) 272-2961. The examiner can normally be reached on Monday-Friday from 7:30am-5:00pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 26, 2006



TAI NGUYEN  
PRIMARY EXAMINER